

MULTI-LAYER MICROFLUIDIC DEVICES

ABSTRACT OF THE DISCLOSURE

The present invention provides multi-layer microfluidic systems, by providing additional substrate layers, e.g., third, fourth, fifth and more substrate layers, mated with the typically described first and second layers. Microfabricated elements, e.g., grooves, wells and the like, are manufactured into the surfaces between the various substrate layers. These microfabricated elements define the various microfluidic aspects or structures of the overall device, e.g., channels, chambers and the like. In preferred aspects, a separate microscale channel network is provided between each of the substrate layers.